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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,654	01/20/2004	Chu-Ming Lin	251316-1330	1019
24504 7590 06/26/2007 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			EXAMINER SAM, PHIRIN	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 06/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/760,654

Applicant(s)

LIN, CHU-MING

Examiner

Phirin Sam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-7 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2002/0150106 (hereinafter referred as “Kagan”).

Regarding claim 1, Kagan discloses a multi-queue network apparatus for quality of service oriented communication, comprising:

(a) a host system comprising a system memory and a peripheral bus, the system memory including a plurality of queues each of which is configured to store data packets to be transmitted (see Fig. 1, elements 38, paragraph [0073]);

(b) a peripheral module comprising:

(b1) an arbiter, adapted to interface with the peripheral bus, maintaining a plurality of next access pointers targeting each queue within the system memory, respectively, determining which queue is to be serviced next contingent upon a quality of service policy, and fetching at least one data packet identified by the chosen queue's next access pointer (see Fig. 2, paragraphs [0078]-[0081]);

(b2) a FIFO buffer, connected to the arbiter, storing and managing the fetched data packet in a first-in-first-out manner (see Figs. 1-4, elements 66 and 69, paragraphs [0083], [0084], and [0102]);

(b3) physical layer interface logic, connected to the FIFO buffer, accepting therefrom each data packet, if available, and preparing the data packet for transmission on a physical medium (see Fig. 2, element 70, paragraph [0099]).

Regarding claim 2, Kagan discloses the host system maintains a plurality of lists of descriptors targeting each queue within the system memory, respectively, each list of descriptors includes access information for the data packets stored in an associated queue, and each descriptor is responsible for identifying one data packet (see Figs. 1-4, paragraph [0076]).

Regarding claim 3, Kagan discloses each next access pointer points to the descriptor subsequent to a previous descriptor within a list of descriptors for a queue, in which the previous descriptor identifies the data packet most recently fetched from the queue (see Figs. 1-4, paragraph [0076]).

Regarding claim 8, Kagan discloses an apparatus for servicing multiple queues in a host system using reduced number of FIFO buffers, comprising:

- (a) an arbiter for maintaining a plurality of next access pointers for the multiple queues storing data packets to be transmitted, determining which queue is to be serviced next contingent upon a quality of service policy, and fetching at least one data packet, which is identified by the chosen queue's next access pointer, through a peripheral bus by means of direct memory access (see Figs. 1 and 2, paragraphs [0076]-[0078]);
- (b) a FIFO buffer, connected to the arbiter, storing and managing the fetched data packet in a first-in-first-out manner (see Figs. 1-4, paragraphs [0084], [0102]);
- (c) physical layer interface logic, connected to the FIFO buffer, accepting therefrom each

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data packet, if available, and preparing the data packet for transmission on a physical medium (see Figs. 1 and 2, paragraph [0101]).

Regarding claim 9, kagan discloses a plurality of lists of descriptors targeting each queue is maintained within a system memory of the host system, respectively, each list of descriptors includes access information for the data packets stored in an associated queue, and each descriptor is responsible for identifying one data packet (see Figs. 1 and 2, paragraph [0076]).

Regarding claim 10, Kagan discloses each next access pointer points to the descriptor subsequent to a previous descriptor within a list of descriptors for an associated queue, in which the previous descriptor identifies the data packet most recently fetched from the queue (see Figs. 1 and 2, paragraph [0076]).

Allowable Subject Matter

3. Claims 4-7 are allowed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) US Patent 6,947,438 (Chang et al) discloses pci and mii compatible home phoneline networking alliance (hpna) interface device.

(2) US Patent 6,044,225 (Spencer et al) discloses multiple parallel digital data stream channel controller.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on a compress schedule, from 8:00-5:30, first Wed off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272 - 3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Respectfully submitted,

Date: June 21, 2007

A handwritten signature in black ink, appearing to read 'Phirin', written over a horizontal line.

**PHIRIN SAM
PRIMARY EXAMINER**